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Federal-State Cooperative
Snow Surveys and Water Supply Forecasts

Montana and Northern Wyoming
Upper Missouri,
Upper Columbia and
Yellowstone Rivers

SOIL CONSERVATION SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE
AND
MONTANA AGRICULTURAL EXPERIMENT STATION

In cooperation with the U. S. Forest Service, U. S. Geological Survey, National Park Service, U. S. Bureau of Reclamation, State Engineers of Montana and Wyoming and other Federal, State and local Organizations.

AS OF
MAY 1, 1956

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UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

TO RECIPIENTS OF COOPERATIVE SNOW SURVEY
AND WATER SUPPLY FORECAST REPORTS:

Snow surveys in the West are conducted each year at more than 1200 snow courses. Basin and Province or State snow survey reports summarizing the results of the measurements and forecasts of seasonal runoff and water supply are issued by the Soil Conservation Service, U. S. Department of Agriculture and some of its cooperators; the Water Rights Branch of the British Columbia Department of Lands and Forests; and the California Division of Water Resources.

Copies of the various federal-state cooperative snow survey reports listed below may be secured by writing to:

Head, Water Supply Forecasting Section
Soil Conservation Service
209 S. W. 5th Avenue
Portland 4, Oregon

BASIN REPORTS:

Colorado, Rio Grande, and Platte-Arkansas River Basins	Issued monthly February through May by SCS and Colorado Experiment Station, Fort Collins, Colorado. *
Columbia River Basin	Issued monthly January through May by Soil Conservation Service, Boise, Idaho. *
Upper Missouri River Basin	Issued monthly February through May by SCS and Montana Agricultural Experiment Station, Bozeman, Montana. *
West-Wide Water Supply Outlook	Issued April 1 by Soil Conservation Service and Cooperators, Portland, Oregon.

STATE REPORTS:

Arizona	Issued semi-monthly January 15 through April 1 by SCS and Salt River Valley Water Users Association, Phoenix, Arizona. *
Nevada	Issued monthly February through April by SCS and Nevada State Engineer, Reno, Nevada. *
Oregon	Issued monthly January through May by SCS, Portland, Oregon, and Oregon Agricultural Experiment Station. *
Utah	Issued monthly January through May by SCS, Salt Lake City, Utah, and State Engineer of Utah and Utah Agricultural Experiment Station. *
Washington	Issued monthly February through May by SCS, Spokane, Washington, and State Department of Conservation and Development. *
Wyoming	Issued monthly February through May by SCS, Casper, Wyoming, and State Engineer of Wyoming. *

*Special reports are issued as needed.

The British Columbia reports are issued February 1 through June 1 and may be secured from Comptroller, Water Rights Branch, Department of Lands and Forests, Parliament Buildings, Victoria, B.C.

The California reports are issued monthly February 1 through May 1 and may be secured from Division of Water Resources, California Department of Public Works, Sacramento, California.

The annual water supply forecasts of the Weather Bureau are available in monthly bulletins published from January through May. These bulletins entitled, "Water Supply Forecasts for the Western United States' may be obtained from River Forecast Center, Weather Bureau, 712 Federal Office Building, Kansas City 6, Missouri.

FEDERAL - STATE COOPERATIVE

SNOW SURVEYS and WATER SUPPLY FORECASTS

for

MONTANA AND NORTHERN WYOMING

(Upper Missouri and Upper Columbia River Basins)

Report Prepared by:

A. R. Codd
Hydraulic Engineer
Soil Conservation Service

and
O. W. Monson
Irrigation Engineer
Montana Agricultural
Experiment Station

Soil Conservation Service
U. S. Department of Agiriculture
and
Montana Agricultural Experiment Station
Bozeman, Montana

Report issued by:

Truman C. Anderson
State Conservationist
of Montana

M. M. Kelso, Director
Montana Agricultural
Experiment Station

WATER SUPPLY OUTLOOK
as of
MAY 1, 1956

May 1 snow survey measurements over the Missouri River Tributary Rivers show normal decline of water content in the snow-pack during April. Valley precipitation was generally above average. Water supply forecasts are still above average and considerably above last season. Streamflow forecasts were raised 2 to 5 per cent above April 1 estimates.

Reservoir Storage is good in anticipation of an above average runoff. Ground water levels are highest of the 7 year record.

On the Columbia Basin a normal decline of 2 to 7 inches of water were measured. On the Kootenai Basin several of the higher courses showed an increase in water content. Heavy flows during April have eased the critical situation. The Flathead Basin has 20 to 30 per cent more snow water content than average also, as does the Clark Fork.

JEFFERSON RIVER:

May snow surveys were made at only one course in this basin and two courses in the adjacent basin to the west. All three were well above the May first average. The lower part of the Jefferson below the confluence of the Big Hole River should produce a seasonal flow 30 per cent more water than average, and 15 per cent more than last season. The upper reaches of the Beaverhead, in the vicinity of Red Rock Lakes, will be below average flow by 10 per cent.

MADISON RIVER:

May snow surveys show above average water content in Yellowstone Park. Due to near normal precipitation during April in the head of this basin, the forecast of stream-flow remained the same as of April first; 28 per cent above average at West Yellowstone. The inflow to Hebgen Lake is now forecast at 254,000 acre-feet from April through September.

GALLATIN RIVER:

With a slight increase in snow water content at two courses in this basin, the water supply looks better than April 1. The revised figures are 21 per cent above average and 50 per cent above last season. This stream at Gateway should flow 540,000 acre-feet of water during the April-September season.

MISSOURI MAIN STEM:

The three rivers forming the Missouri at Three Forks should produce 2,900,000 acre-feet of water into Canyon Ferry Reservoir from April through September. This volume is 28 per cent greater than average and about 75 per cent more than last season. The April-September flow past Zortman into Fort Peck is forecast to be 5,376,000 acre-feet, or 23 per cent above average for the period. The combined Missouri and Yellowstone Rivers at Williston, North Dakota, should flow 14,264,000 acre-feet of water into Garrison Reservoir with five and one-third million acre-feet subject to regulation at Fort Peck Reservoir.

YELLOWSTONE RIVER:

The 1956 snow-pack in Yellowstone Park is still 40 per cent above average. There are 4 feet of snow at Canyon Lodge and 3½ feet at Lake. The Yellowstone River at Corwin Springs is forecast to flow 30 per cent more than average. The Shields River is forecast to flow 20 per cent better than average, and the Clarks Fork River will also flow 20 per cent better than average. This means an excellent water supply from these two streams. At Billings the Yellowstone River should pass 5,102,000 acre-feet between April and September, 27 per cent more than the usual amount. Downstream stations should receive relatively the same proportion above average flows.

COLUMBIA BASIN

KOOTENAI RIVER:

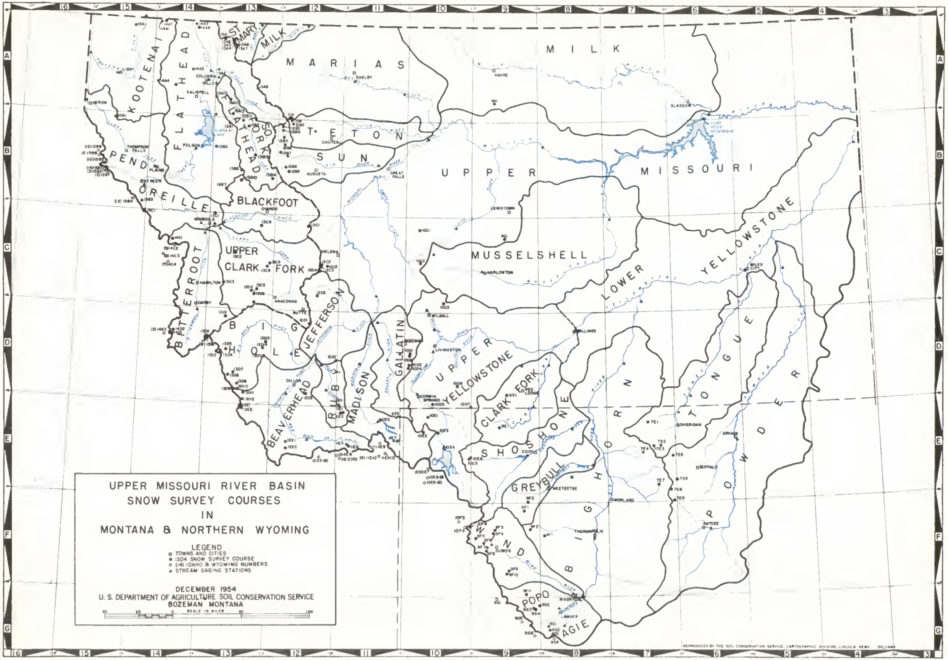
May snow surveys in Canada, B. C., and northwestern Montana show considerable loss of snow at low elevations with some increases of snow water content at high elevations. The exceedingly high flows during April have eased the prospects of over-levy heights of water to some extent; however, snow water content measurements are above May first averages and almost as high as May, 1954.

FLATHEAD RIVER:

May first snow surveys made at most of the courses on this basin show water content figures above April first averages by 20 to 30 per cent, especially in the higher altitudes. Most of the snow below 4,000 feet has disappeared. April stream-flow in this basin was only 10 per cent above average, which is much lighter than on the Kootenai and Clark Fork, where the April flows were 63 to 94 per cent above average. The April-September period flow into Hungry Horse Reservoir has been raised slightly to 2,598,000 acre-feet or 126 per cent average.

CLARK FORK:

The prolonged warm weather during the middle of April took off most of the low snow; however, the higher elevation courses above 6,000 feet still have above May first water content values by 10 to 30-40 per cent. There is still considerable water to come from the higher snow fields. April-September forecasts have been raised slightly to account for the above normal precipitation during April.



UPPER MISSOURI RIVER BASIN
SNOW SURVEY COURSES
IN
MONTANA & NORTHERN WYOMING

LEGEND
- □ TOWNS AND CITIES
- ● 1304 SNOW SURVEY COURSE
- ○ (14) IDAHO & WYOMING NUMBERS
- ▲ STREAM GAGING STATIONS

DECEMBER 1954
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE
BOZEMAN MONTANA

REPRODUCED BY THE SOIL CONSERVATION SERVICE CARTOGRAPHIC DIVISION, LINCOLN NEBR 5R 11484

INDEX TO MONTANA & NORTHERN WYOMING SNOW COURSES

MISSOURI RIVER DRAINAGE

Drainage Basin and Course Name	Montana Number	Elev.	Location			Record Began	Measuring Dates[a]	Measured By:[b]
			Sec. Lat.	Twp.	Range Long.			
JEFFERSON RIVER								
(ROCK-BEAVERHEAD)								
Lakeview Ridge	11E3	7400	27	14S	2W	1948	3,4,5,	9
Lakeview Canyon	11E4	6930	26	14S	2W	1948	3,4,5	9
Limekiln	12B2	6950	5	15S	9W	1946	3,4	1
White Pine Ridge	12E1	8850	18	14S	9W	1948	3,4	1
(HORSE PRAIRIE)								
Bloody Dick	13D10	7600	12	8S	16W	1948	3,4	1
Gold Stone	13D9	8100	11	8S	16W	1948	3,4	1
Lemhi Pass	13E1	7480	9	10S	15W	1948	3,4	1
Terrell Creek	13D12	6650	14	9S	15W	1948	3,4	1
Trail Creek	13E2	7090	15	10S	15W	1948	3,4	1
Selway Junction	13D11	6800	27	8S	15W	1948	3,4	1
(BIG HOLE)								
Big Hole Pass	13D3	7400	28	3S	18W	1948	3,4	1
Big Hole Pass-Below	13D4	6900	24	3S	18W	1948	3,4	1
East Boundary	13D5	6700	22	3S	17W	1948	3,4	1
Gibbons Pass	13D2	7100	4	2S	19W	1934	1,2,3,4,5	1,2
Jannke Creek	13D8	7340	25	7S	16W	1948	3,4	1
Miner Forks	13D6	7300	24	6S	17W	1948	3,4	1
Miner Lake	13D7	6720	10	6S	16W	1945	3,4,5	1
(WISE RIVER)								
Anderson Mdw.	13D14	7000	18	3S	12W	1948	3,4	1
Elk Horn	13D15	8450	15	4S	12W	1934	3,4,5	2
Wise River	13D13	6300	15	2S	12W	1948	3,4	1
(RUBY RIVER)								
Cottonwood	11E2	5900	24	10S	3W	1948	3,4	1
Cottonwood (Upper)	11E1	8400	30	10S	2W	1948	3,4	1
Flashlight	12D3	6950	22	8S	7W	1945	3,4,5	1
Tobacco Root	12D2	6900	13	4S	4W	1948	3,4	1
Vigilante	11D1	6125	28	9S	3W	1948	3,4	1
MADISON RIVER								
Hebgen	11E5	6550	22	11S	3E	1934	1,2,3,4,5	2
West Yellowstone	11E7	6700	34	13S	5E	1934	1,2,3,4,5	2
Norris Basin	10E2	7500	44°-42'		110°-42'	1935	3,4	5,6
GALLATIN RIVER								
Devil's Slide	10D4	8100	14	5S	6E	1935	2,3,4,5	2,6
Hood Meadow	10D3	6600	22	4S	6E	1934	2,3,4,5	2,6
Mystic Lake	10D2	6600	30	3S	7E	1935	2,3,4	6,7
New World	10D1	6700	24	3S	6E	1939	1,2,3,4,5	6,7
21-Mile	11F6	7150	1	11S	5E	1934	1,2,3,4,5	2
MISSOURI RIVER MAIN STEM								
Cheesman Reservoir	12C5	6200	2	8N	5W	1936	1,2,3,4,5	2
Crystal Lake	9C1	6100	19	12N	18E	1941	3,4	1
Grasshopper	10C2	7000	19	9N	8E	1938	3,4	1,12
Kings Hill	10C1	7950	35	13N	7E	1937	3,4,5	2
Picnic Grounds	12C6	6500	10	5N	6W	1940	2,3,4	3
Pipestone Pass	12D1	7200	11	1N	7W	1938	2,3,4,5	12
Stemple Pass	12C1	6900	16	13N	7W	1934	3,4,5	2
Ten Mile Cr.,Lower	12C2	6250	13	8N	6W	1935	1,2,3,4,5	2
Ten Mile Cr.,Middle	12C3	6800	13	8N	6W	1934	1,2,3,4,5	2
Ten Mile Cr., Upper	12C4	8000	19	8N	5W	1935	1,2,3,4,5	2
(TETON RIVER)								
Freight Creek	12A1	6000	13	26N	10W	1948	3,4	1,12
Waldron Creek	12B2	5600	16	25N	9W	1948	3,4	1,12
West Fork	12B1	6000	6	25N	9W	1948	3,4	1,12
(SUN RIVER)								
Benchmark	12B8	5500	9	20N	10W	1948		1
Cabin Creek	12B6	5400	33	23N	10W	1949	3,4	1
S-Bull	12B9	5600	36	20N	10W	1948		1
Gates Park	12B5	5300	31	24N	10W	1949	3,4	1
Goat Mountain	12B7	7000	20	22N	10W	1934	3,4	2
Wrong Ridge	12B3	6800	17	25N	10W	1949	3,4	1
Wrong Creek	12B4	5700	32	25N	10W	1949	3,4	1
(MARIAS RIVER)								
Marias Pass	13A5	5250	34	30N	14W	1936	1,2,3,4,5	2
(MILK RIVER)								
Rocky Boy	9A1	5200	15	28N	16E	1941	3,4	7
(MUSSELSHELL RIVER)								
Grasshopper	10C3	7000	19	9N	8E	1938	3,4	1,12
(UPPER YELLOWSTONE)								
Camp Senia	9D1	7890	2	8S	18E	1937	4,	1,12
Canyon	10E3	7750	44°-44'		110°-30'	1938	1,2,3,4,5	12
Cooke City	10D7	7400	25	9S	14E	1937	1,2,3,4,5	5
Crevice Mt.	10D5	8400	22	9S	9E	1935	3,4	1
Independence	10D6	8000	22	7S	12E	1941	3,4	12
Lake Camp	10E4	7850	44°-34'		110°-24'	1937	1,2,3,4,5	12
Lupine Creek	10E1	7300	44°-54'		110°-37'	1938	1,2,3,4,5	5
(SHIELDS RIVER)								
Porcupine	10C3	6500	10	4N	10E	1938	3,4	1
LOWER YELLOWSTONE								
(WIND RIVER) Wyoming								
Brooks Lake #3	10F8	9200	23	44N	110W	1939	2,3,4,5	12
Burroughs Creek	9F4	8800	15	43N	107W	1948	2,3,4,5	12
Dinwoodie	9F10	10000	21	39N	105W	1948	2,3,4,5	12
Dry Creek	9F9	9500	34	1N	6W	1948	2,3,4,5	12
DuNoir	9F6	8750	27	42N	108W	1940	2,3,4,5	12
Geyser Creek	9F7	8500	12	41N	108W	1948	2,3,4,5	12
Hobbs Park	9G3	10000	22	2S	3W	1949	2,3,4,5	12
Little Warm	9F8	9500	24	41N	108W	1948	2,3,4,5	12
Mosquito Park R.S.	9G4	9500	23	2S	3W	1940	2,3,4,5	12
Sheridan R.S.	9F5	7500	3	42N	109W	1939	2,3,4,5	12
St. Lawrence R.S.	9F11	9000	26	1N	4W	1940	2,3,4,5	12
T-Cross Ranch	9F3	8000	1	43N	107W	1940	2,3,4,5	12
Trout Creek	9G2	8400	5	2S	2W	1948	2,3,4,5	12
Togwotee Pass	10F9	9600	29	44N	110W	1936	2,3,4,5	10

MISSOURI RIVER DRAINAGE CONT.

Drainage Basin and Course Name	Montana Number	Elev.	Location			Record Began	Measuring Dates[a]	Measured By:[b]
			Sec. Lat.	Twp.	Range Long.			
(POPO AGIE RIVER) Wyoming								
Blue Ridge	8G2	9500	23	31N	101W	1939	2,3,4,5	12
Granier Meadows	8G4	9000	19	30N	100W	1936	2,3,4,5	12
Larsen Creek	9G6	9000	12	30N	103W	1948	3,4,5	12
Sawmill Glade	8G1	8500	3	31N	101W	1939	2,3,4,5	12
South Pass	8G3	9000	13	30N	101W	1939	2,3,4,5	12
(BIG HORN RIVER) Wyoming								
Beavers Mill	9F2	8900	6	43N	102W	1948	2,3,4,5	12
Owl Creek	8F1	8700	36	43N	101W	1948	2,3,4,5	12
Tensleep R.S.	7E7	8300	30	49N	86W	1935	4,5	1
Timber Creek	9E2	8800	25	47N	103W	1948	4,5	12
Ranger Creek	7E4	8800	32	53N	88W	1935	4,5	1
Wood River	9F1	8000	28	46N	103W	1939	2,3,4,5	12
(Shoshone River) Wyoming								
East Entrance	10E6	7000	17	52N	109W	1948	1,2,3,4,5	5
Sylvan Pass	10E5	7100	12	52N	110W	1936	1,2,3,4,5	5
(TONGUE RIVER) Wyoming								
Big Goose	7E2	7700	4	53N	86W	1945	2,3,4,5	1
Burgess Ranger Sta.	7E1	7900	36	56N	89W	1950	2,3,4,5	12
Dome Lake	7E3	8800	11	53N	87W	1950	2,3,4,5	12
Lodgepole	9E1	8200	32	56N	106W	1940	4,5	1
POWDER RIVER								
North Powder	7E9	8500	5	47N	85W	1951	2,3,4,5	12
Muddy Pass	7E8	9700	11	48N	85W	1950	2,3,4,5	1
Soldier Park	7E5	8700	36	51N	85W	1950	2,3,4,5	12
Sour Dough	7E6	8500	17	49N	84W	1936	2,3,4,5	1

COLUMBIA RIVER BASIN

Drainage Basin and Course Name	Montana Number	Elev.	Sec. Lat.	Twp.	Range Long.	Record Began	Measuring Dates[a]	Measured By:[b]
KOOTENAI RIVER								
Baree Mountain	15B1	6000	1	25N	31W	1937	4,5,5½	1
Blue Bird Basin	14A1	6800	24	37N	26W	1937	4,5,5½	1
Red Mountain	15A1	6000	4	36N	29W	1937	3,4,5,5½	1
Weasel Divide	14A7	5450	8	37N	24W	1955	4,5,5½	1
FLATHEAD RIVER								
Basin Creek	13B14	5000	11	19N	12W	1951	2,3,4,5	1
Big Creek	13B3	6750	6&7	22N	18W	1941	3,4,5	4
Brush Creek	14A4	5000	13	30N	26W	1937	3,4,5	1
Cattle Queen	13A1	4700	7	35N	17W	1939	3,4,5	5
Desert Mountain	13A2	5600	24	31N	19W	1937	1,2,3,4,5	1
Hell Roaring Divide	14A3	5770	35	32N	22W	1942	3,4,5	1
Holbrook	13B13	4530	18	21N	13W	1951	1,2,3,4,5	1
Kishenehn	14A2	4300	7	37N	21W	1946	4,5	5
Kishenehn #3	14A6	4000	14	37N	22W	1954	4,5	5
Logan Creek	14A5	4300	34	30N	24W	1937	3,4,5	1
Marias Pass	13A5	5250	34	30N	14W	1934	1,2,3,4,5	2
Spotted Bear Mt.	13B2	7000	23	25N	15W	1948	3,4,5	1
Strawberry Lake	13A10	6500	11	28N	19W	1948	3,4,5	1
Trinkus Lake	13B1	6500	9	25N	17W	1948	3,4,5	1
Trout Lake #2	13A12	3600	21	28N	17W	1948	3,4,5	1
Upper Holland Lake	13B5	7000	28	20N	16W	1948	3,4,5	1
Twin Creeks	13B11	3580	14	26N	16W	1951	2,3,4,5	1
Quintonkon	13A13	3800	11	26N	17W	1951	2,3,4,5	1
Coyote Hill	13B10	4200	12	18N	16W	1952	1,2,3,4,5	1
El Dorado Mine	13C9	7800	23	8N	12W	1946	4	12
Gold Creek Lake	13C8	7200	14	8N	12W	1946	4	12
Intergaard	13C4	6450	6	5N	13W	1939	2,3,4	3
Lubrecht Forest # 6	13C8	5400	31	14N	15W	1951	1,2,3,4,5	13
North Fork Jocko	13B7	6330	3	17N	17W	1941	3,4,5	4
Picnic Grounds	12C6	6500	10	5N	6W	1940	2,3,4	3
Pipestone Pass	12D1	7200	11	1N	7W	1938	2,3,4,5	1
Slide Rock Mountain	13C2	7100	26	10N	16W	1937	4	1,12
Southern Cross	13C5	6500	8	5N	13W	1939	2,3,4	3
Stemple Pass	13C1	6900	16	13N	7W	1934	3,4,5	2
Storm Lake No. 2	13C7	7780	19	4N	13W	1939	2,3,4	1
Stuart Mill	13C6	6500	19	5N	13W	1939	2,3,4	3
Stuart Mountain #1	13C1	7400	6	14N	18W	1936	4	1,12
PEND OREILLE RIVER								
Bares Mountain	13B1	6000	1	25N	31W	1937	4,5,5½	1
Freezeout Summit #2	15B10	6800	21	15N	27W	1951	4,5	1
Hoodoo Creek	15C1	6200	9&16	14N	27W	1937	4,5	1
BITTERROOT RIVER								
East Fork Ranger Sta.	13D1	5400	16	2N	17W	1937	4	1,12
Gibbons Pass	13D2	7100	4	2S	19W	1934	1,2,3,4,5	1,12
Mud Creek Pasture	14C1	4500	24	11N	24W	1937	3	1
Nez Perce Camp	14D2	5580	19&20	1S	23W	1937	3,4,5	1,12
Nez Perce Pass	14D1	6575	32	28N	16N	1937	3,4,5	1,12
Skalkaho Summit	13C3	7259	30	6N	17W	1937	4	1,12

SASKATCHEWAN RIVER BASIN

Drainage Basin and Course Name	Montana Number	Elev.	Sec. Lat.	Twp.	Range Long.	Record Began	Measuring Dates[a]	Measured By:[b]
ST. MARY RIVER								
Iceberg Lake	13A3	6000	48°-50'		113°-42'	1922	5	2,8
Piegan Pass #4	13A4	5000	48°-46'		113°-40'	1922	5	2,8
Piegan Pass #6	13A6	6500	48°-45'		113°-42'	1922	5	2,8
Mount Allen #7	13A7	7000	48°-44'		113°-40'	1922	5	2,8
Ptarmigan #8	13A8	5800	48°-50'		113°-42'	1922	5	2,8

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a. Numerals 1,2,3,4 and 5 refer to January 1, February 1, March 1, April 1, and May 1.

b. Numerals refer to Agency that secures the snow survey as follows:

1. U.S. Forest Service
2. U.S. Geological Survey
3. Montana Power Company
4. U.S. Indian Service
5. National Park Service
6. Montana Experiment Station
7. City of Bozeman
8. Dominion Water & Power Bureau
9. U.S. Fish and Wildlife Service
10. U.S. Bureau of Reclamation
11. Deer Lodge Citizens Committee
12. Soil Conservation Service
13. Montana State Forestry School

5,R-11,484-A

MONTANA STREAM-FLOW FORECASTS MAY 1, 1956

The following summarized runoff forecasts are based principally on mountain snow cover and on the assumption that precipitation and temperature during the forecast period will be near average. Appreciable deviations from normal of precipitation and temperature during the forecast period will correspondingly modify these forecasts.

	Seasonal Stream-Flow in Thousands of Acre Feet					
UPPER MISSOURI RIVER IN MONTANA	FORECAST RUNOFF	% 15-Yr. AVG.	FORE-CAST PERIOD	Measured Runoff** 1954	1953	15-Yr. Avg. 1938-52
RED ROCK RIVER						
Monida (near) (1)	73	90	Apr-Sept	61	72	81
	61	90	Apr-July	55	73	76
BEAVERHEAD RIVER						
Barratts (at)	196	110	Apr-Sept	96	170	177
	149	110	Apr-July	71	130	134
BIG HOLE RIVER						
Melrose (near)	952	128	Apr-Sept	541	745	745
	800	128	Apr-July	497	699	687
JEFFERSON RIVER						
Sappington (at)	1359	130	Apr-Sept	633	1006	1046
	1206	129	Apr-July	564	921	929
MADISON RIVER						
West Yellowstone (near)	254	128	Apr-Sept	219	207	198
	194	128	Apr-July	168	158	151
Grayling (near) (2)	542	128	Apr-Sept	421	434	420
(Net inflow to Hebgen Lk)	429	129	Apr-July	333	347	333
McAllister (near) (3)	910	125	Apr-Sept	658	718	726
	734	125	Apr-July	521	577	585
GALLATIN RIVER						
Gateway (near)	540	121	Apr-Sept	365	403	445
	465	121	Apr-July	310	345	384
Logan (at)	617	129	Apr-Sept	322	442	478
	494	129	Apr-July	261	379	410
MISSOURI RIVER						
Toston (at) (3)	2900	128	Apr-Sept	1561	2139	2255
	2453	129	Apr-July	1322	1868	1896
Fort Benton (at) (4)	4360	129	Apr-Sept	2608	4556	3381
	3675	128	Apr-July	2174	4019	2874
Virgelle (at) (4) (Loma)	5295	132	Apr-Sept	3395	5864	4013
	4520	131	Apr-July	2869	5275	3445
Zortman (near) (4)	5376	123	Apr-Sept	3749	6715	4357
	4575	123	Apr-July	3147	6058	3726
Ft. Peck Dam(below)(5)	5208	119	Apr-Sept	3315	5798	4362
	4513	119	Apr-July	2580	5353	3792
Williston, N. D. (Inflow to Garrison R.(5)	14264	128	Apr-Sept	--	11565	11154

(1) Observed flow plus change in Storage in Lima Reservoir
(2) Observed flow plus change in Storage in Hebgen Lake
(3) Observed flow plus change in Storage in Hebgen and Ennis Lakes
(4) Observed flow plus change in Storage in Canyon Ferry
(5) Observed flow plus change in Storage in Canyon Ferry & Ft. Peck Reservoirs
(**) Preliminary data furnished by U. S. Geological Survey subject to correction
(*) Average is for less than 15 years of record in the 1938-52 period.

MONTANA STREAM-FLOW FORECASTS MAY 1, 1956

UPPER MISSOURI RIVER IN MONTANA	Seasonal Stream-Flow in Thousands of Acre Feet					
	FORECAST RUNOFF	% 15-Yr. AVG.	FORE-CAST PERIOD	Measured Runoff**		15-Yr. Avg. 1938-52
				1954	1953	
SUN RIVER						
Net inflow to Gibson Reservoir	716	126	Apr-Sept	748	738	570*
	656	126	Apr-July	691	684	521*
MARIAS RIVER						
Shelby (near)	861	163	Apr-Sept	784	933	527
	792	155	Apr-July	715	871	512
Brinkman (near)	886	167	Apr-Sept	767	1025	532
	816	168	Apr-July	700	963	486
JUDITH RIVER						
Utica (near)	37.9	95	Apr-Sept	22.4	38.3	39.8
	34.7	96	Apr-July	20.4	36.0	36.3
MUSSELSHELL RIVER						
Delpine (near)	6.8	100	Apr-Sept	3.1	6.7	6.8*
	5.6	100	Apr-July	2.4	5.6	5.6*
Harlowton (at)	82.4	94	Apr-Sept	26.1	74.2	87.5*
	76.6	94	Apr-July	20.4	66.1	80.9
Mosby (at)	151	91	Apr-Sept	35.0	124.0	166.0
	142	91	Apr-July	17.5	119.0	155.0
YELLOWSTONE RIVER						
Corwin Springs (at)	2434	130	Apr-Sept	2014	1645	1870
	2031	130	Apr-July	1686	1362	1556
Livingston (near)	2757	129	Apr-Sept	2232	1820	2143
	2277	129	Apr-July	1848	1496	1770
Billings (at)	5102	127	Apr-Sept	3642	3367	4025
	4304	125	Apr-July	3129	2854	3446
Miles City (at)	7924	124	Apr-Sept	4735	4648	6369
	6781	124	Apr-July	3980	3905	5421
Sidney (near)	8323	125	Apr-Sept	4765	4716	6648
	7211	125	Apr-July	3991	4053	5724
SHIELDS RIVER						
Wilsall (near)	48.0	120	Apr-Sept	29.8	61.0	40.1
	45.1	119	Apr-July	27.6	58.4	37.6
Clyde Park (at)	125	118	Apr-Sept	65	103	106
	116	119	Apr-July	60	122	98
CLARK'S FORK RIVER						
Chance (at)	708	122	Apr-Sept	600	519	580
	634	122	Apr-July	553	469	517
Edgar (at)	728	119	Apr-Sept	619	528	614
	643	119	Apr-July	561	467	539
Hyalite Cr. R.S. (at)(7)	39	111	Apr-Sept	32	33	35
	32	111	Apr-July	27	29	30

(7) Observed flow plus change in Storage in Hyalite Reservoir
(**) Preliminary data furnished by U. S. Geological Survey subject to correction
(*) Average is for less than 15 years of record in the 1938-52 period.

MONTANA STREAM-FLOW FORECASTS MAY 1, 1956

UPPER COLUMBIA RIVER IN MONTANA	Seasonal Stream-Flow in Thousands of Acre Feet					
	FORECAST RUNOFF	% 15-Yr. AVG.	FORE-CAST PERIOD	Measured Runoff** 1954	Measured Runoff** 1954	15-Yr. Avg. 1938-52
CLARK FORK RIVER						
Bonner (above) (14)	970	129	Apr-Sept	604	808	751
	854	129	Apr-July	512	717	662
	734	130	Apr-June	423	619	566
Missoula (above)	2057	128	Apr-Sept	1737	1887	1602
	1840	129	Apr-July	1535	1695	1429
	1600	130	Apr-June	1248	1435	1229
Missoula (below)	3851	130	Apr-Sept	3309	3158	2971
	3511	130	Apr-July	2979	2879	2700
	3076	132	Apr-June	2385	2370	2335
St. Regis (at)	5079	129	Apr-Sept	4884	4068	3951
	4607	129	Apr-July	4408	3698	3582
	3985	126	Apr-June	3574	3051	3157
Plains (near) (15)	13796	126	Apr-Sept	14695	11882	10747
	12384	126	Apr-July	13274	10953	9813
	10308	122	Apr-June	10423	9062	8434
Cabinet Gorge (at) (15)	15583	129	Apr-Sept	16510	13002	12090
	14160	128	Apr-July	14685	11767	11056
	12016	127	Apr-June	11737	9720	9493
BLACKFOOT RIVER						
Bonner (near)	1087	128	Apr-Sept	1126	1078	851
	979	128	Apr-July	1077	977	767
	845	128	Apr-June	819	816	663
BITTERROOT RIVER						
Darby (near)	694	132	Apr-Sept	523	557	525
	643	132	Apr-July	480	522	487
	565	132	Apr-June	398	429	429
At Mouth (16)	1839	134	Apr-Sept	1725	1201	1369
	1716	135	Apr-July	1598	1184	1270
	1514	137	Apr-June	1396	935	1106
FLATHEAD RIVER						
Columbia Falls (near)	2300	133	Apr-Sept	2741	2049	1729
(North Fork)	2100	133	Apr-July	2444	1875	1575
	1804	134	Apr-June	1874	1540	1350
Columbia Falls (at) (17)	7097	126	Apr-Sept	8267	6522	5619
	6616	127	Apr-Suly	7559	6745	5214
	5798	128	Apr-June	5923	5043	4530
Polson (near) (15)	8319	128	Apr-Sept	9742	7565	6520
	7756	128	Apr-July	8886	7081	6059
	7128	129	Apr-June	6884	5880	5226

(14) Difference in observed flow, Clark Fork above Missoula & Blackfoot at Bonner
(15) Observed flow plus change in Storage in Flathead Lake & Hungry Horse Res.
(16) Difference in observed flow, Clark Fork above and below Missoula
(17) Observed flow plus change in Storage in Hungry Horse Reservoir
(**) Preliminary data furnished by U. S. Geological Survey subject to correction.

MONTANA STREAM-FLOW FORECASTS MAY 1, 1956

	Seasonal Stream-Flow in Thousands of Acre Feet					
UPPER COLUMBIA RIVER IN MONTANA	FORECAST RUNOFF	% 15-Yr. AVG.	FORE-CAST PERIOD	Measured Runoff**		15-Yr. Avg.
				1954	1954	1938-52
MIDDLEFORK FLATHEAD RIVER						
West Glacier (near)	2034	122	Apr-Sept	2446	2066	1662
	1887	123	Apr-July	2245	1926	1540
	1619	122	Apr-June	1743	1581	1322
SOUTH FORK FLATHEAD RIVER						
Columbia Falls(near)(17)	2598	126	Apr-Sept	2852	2277	2058
(Net inflow to Hungry	2468	126	Apr-July	2693	2171	1950
Horse Reservoir)	2198	127	Apr-June	2173	1846	1724
SWAN RIVER						
Big Fork (near)	764	131	Apr-Sept	676	604	584
	680	131	Apr-July	589	534	518
	566	132	Apr-June	431	416	427

(17) Observed flow plus change in Storage in Hungry Horse Reservoir
(**) Preliminary data furnished by U. S. Geological Survey subject to correction.

MONTANA STREAM-FLOW FORECASTS MAY 1, 1956

MISSOURI RIVER BASIN YELLOWSTONE RIVER TRIBUTARIES IN WYOMING	Seasonal Stream-Flow in Thousands of Acre Feet					
	FORECAST RUNOFF	% 15-Yr. AVG.	FORE-CAST PERIOD	Measured Runoff**		15-Yr. Avg.
				1954	1954	1938-52
WIND RIVER						
Dubois (at)	140	137	Apr-Sept	105	92	102
WIND RIVER						
Riverton (at) (8)	610	119	Apr-Sept	--	285	511
BIG HORN RIVER						
Boysen Dam (below)(9)	1100	117	Apr-Sept	630	618	940
Kane (at)	1610	120	Apr-Sept	696	805	1344
St. Xavier (near)(10)	2440	118	Apr-Sept	1226	1096	2065
POPO AGIE RIVER						
No. Popo Agie						
Milford (near)	90	109	Apr-Sept	--	66	83 E.
Little Popo Agie						
Lander (near)	58	109	Apr-Sept	--	36	53 E.
Riverton (near)	370	107	Apr-Sept	--	218	345 E.
SHELL CREEK						
Shell (near)	81	110	Apr-Sept	67	74	74*
SHOSHONE RIVER						
Buffalo Bill Dam(be)(12)	1000	128	Apr-Sept	--	582	780
TONGUE RIVER						
Acme (near)	525	136	Apr-Sept	--	200	239
Decker(near) Mont.(13)	330	140	Apr-Sept	111	190	236

(8) Observed flow plus Storage in Bull Lake and Pilot Butte Reservoirs
(9) Observed flow plus Storage in Boysen Reservoir
(10) Observed flow plus Storage in Boysen
(12) Observed flow plus Storage in Buffalo Bill Reservoir
(13) Observed flow plus Storage in Tongue Reservoir
(**) Preliminary data furnished by U. S. Geological Survey subject to revision
(*) Average is for less than 15 years of record in the 1938-52 period.

MONTANA SNOW SURVEYS - MAY 1, 1956

MISSOURI BASIN DRAINAGE BASIN AND SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS						Total Years of Record
				1956		Past Record Water Content			
			Date of Survey	Snow Depth (In.)	Water Content (In.)	1955	1954	15-Year Average 1938-52	
JEFFERSON RIVER									
(Big Hole)									
Gibbons Pass	13D2	7100	4/30	60	27.2	24.3	23.8	20.0*	20
*Moose Creek	13D16	6200	5/1	36	15.8	--	--	9.9*	12
(Wise River)									
Elk Horn	13D15	8450	4/26	27	9.8	11.0	7.7	5.5*	13
MADISON RIVER									
Hebgen	11E5	6550	4/28	4	1.6	7.8	0	2.6	22
W. Yellowstone	11E7	6700	4/28	15	5.7	8.4	2.8	3.5	22
21-Mile	11E6	7150	4/28	41	17.7	15.0	14.4	11.2	22
**Big Springs	11E9	6500				--	--	--	4
**Island Park	11E10	3600				--	tr	--	5
**Valley View	11E8	6500				--	--	--	2
Norris Basin	10E2	7500	5/2	18	5.7	8.3	6.3	3.7*	4
GALLATIN RIVER									
Devil's Slide	10D4	8100	4/25	69	26.2	22.9	20.1	21.8	21
Hood Meadow	10D3	6600	4/25	16	4.8	10.4	3.7	4.2	21
21-Mile	11E6	7150	4/28	41	17.7	15.0	14.4	11.2	22
MISSOURI RIVER MAIN STEM									
Chessman Res.	12C5	6200	4/30	8	2.3	7.4	1.2	1.6	20
Kings Hill	10C1	7950	4/25	41	12.3	16.1	14.6	12.1*	15
Pipestone Pass	12D1	7200	4/27	3	0.7	9.8	1.1	2.1*	16
Stemple Pass	12C1	6900	4/30	30	9.4	11.4	13.4	6.6*	21
Tenmile, Lower	12C2	6250	4/27	10	2.7	8.4	3.5	2.0	20
Tenmile, Middle	12C3	6800	4/27	31	9.9	13.8	10.1	6.9	21
Tenmile, Upper	12C4	8000	4/27	40	14.7	17.7	14.9	10.4	20
(Sun River)									
Goat Mountain	12B7	7000	4/28	41	12.2	--	19.2	3.6*	8
(Marias River)									
Marias Pass	13A5	5250	4/26	51	21.4	16.0	33.0	9.9	21
UPPER YELLOWSTONE									
Canyon	10E3	7750	4/30	47	17.4	14.5	13.3	11.6*	9
Cooke City	10D7	7400	5/2	20	6.8	6.6	5.4	4.8*	11
Lake Camp	10E4	7850	4/30	41	15.2	8.8	8.1	8.0*	10
Lodgepole, Wyo.	9E1	8200	5/1	51	16.0	9.2	11.8	9.2*	17
Lupine	10E1	7300	5/2	27	9.4	10.5	9.5	6.0*	6

* Average is for less than 15 years of record in the 1938-52 period

** Adjacent Basin

MONTANA SNOW SURVEYS - MAY 1, 1956

COLUMBIA BASIN DRAINAGE BASIN AND SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS						Total Years of Record
			Date of Survey	1956		Past Record Water Content			
				Snow Depth (In.)	Water Content (In.)	1955	1954	15-Year Average 1938-52	
KOOTENAI RIVER (above Libby, Montana)									
Baree Creek	15B11	5500	5/1	100	51.0	--	--	--	0
Baree Mt.	15B1	6000	5/1	112	57.4	43.5	57.2	40.3	19
Blue Bird	14A1	6800	4/30	119	52.6	43.0	59.4	36.4*	17
Brush Creek	14A4	5000	4/30	35	14.3	13.9	18.6	5.8*	12
Fernie	Can	3500	4/30	17	5.9	7.9	13.9	1.7*	10
New Fernie	Can	4100	4/30	24	8.6	13.9	21.3	--	5
Kimberley	Can	3800	4/30	4	1.4	--	--	--	0
Marble Canyon	Can	5000	4/30	39	11.6	11.3	21.8	13.1*	9
Red Mt.	15A1	6000	5/3	63	25.2	19.2	30.0	15.1*	18
Gray Creek	Can	5100	4/30	52	20.4	23.2	24.8	19.6*	8
Sandon	Can	3500	4/30	13	6.3	13.7	15.7	2.1*	10
Sinclair Pass	Can	4500	4/30	9	3.4	5.5	8.4	1.2*	9
Smith Creek	16A1	4800				50.0	61.8	34.4*	17
Sullivan Mine	Can	5100	5/1	41	16.1	11.6	19.2	9.5*	10
Weasel Divide	14A7	5250	5/1	96	41.0	35.4	--	--	1
FLATHEAD RIVER									
Basin Creek	13B14	5000	5/5	0	0	6.1	6.3	--	5
Big Creek	13B3	6750	5/2	103	48.5	43.4	49.0	43.1*	7
Blue Bird	14A1	6800	4/30	119	52.6	43.0	59.4	36.4*	17
Brush Creek	14A4	5000	4/30	35	14.2	13.9	18.6	5.8*	12
Coyote Hill	13B10	4200	5/1	2	0.9	4.8	5.6	1.5*	9
Desert Mountain	13A2	5600	4/30	36	14.9	14.4	17.8	9.8	19
Goat Mountain	12B7	7000	4/28	41	12.2	--	19.2	3.6*	8
Hell Roaring Div.	14A3	5700	4/27	70	32.0	27.9	35.7	26.7*	14
Holbrook	13B13	4530	5/5	0	0	5.8	4.6	--	5
Kishenehn	14A2	4300	4/30	0	0	--	--	--	0
Logan Creek	14A5	4300	5/1	15	4.2	7.3	7.2	1.1*	17
Marias Pass	13A5	5250	4/26	51	21.4	16.0	33.0	9.9	21
N. Fork Jocko	13B7	6330	4/30	92	48.3	45.6	50.3	35.6*	8
Quintonkon	13A13	3800	4/30	18	5.5	10.0	11.9	--	5
Spotted Bear Mt.	13B2	7000	4/30	28	10.9	12.5	17.6	--	5
Strawberry Lake	13A10	6500	5/2	99	41.2	39.7	45.7	40.4*	7
Trinkus Lake	13B1	6500	4/30	102	36.4	42.1	52.0	40.8*	7
Trout Lake	13A12	3600	4/30	16	5.9	14.5	14.9	9.0*	8
Twin Creeks	13B11	3580	4/30	0	0	4.5	4.8	-- *	5
Upper Holland	13B5	7000	5/2	87	39.5	33.9	46.2	-- *	5

*Average is for less than 15 years of record in the 1938-52 period.

MONTANA SNOW SURVEYS - MAY 1, 1956

				SNOW COVER MEASUREMENTS					
				1956		Past Record Water Content			
COLUMBIA BASIN DRAINAGE BASIN AND SNOW COURSE	No.	Elev.	Date of Survey	Snow Depth (In.)	Water Content (In.)	1955	1954	15-Year Average 1938-52	Total Years of Record
UPPER CLARK FORK									
Baree Creek	15B11	5500	5/1	100	51.0	--	--	--	0
Baree Mountain	15B1	6000	5/1	112	57.4	43.5	57.2	40.3	19
Chessman Res.	12C5	6200	4/30	8	2.3	7.4	1.2	1.6	20
Coyote Hill	13B10	4200	5/1	2	0.9	4.8	5.6	1.5*	9
Fish Lake, Ida.	21B4	5000	4/30	92	47.2	46.5	--	--	1
**49 Meadows	15B3	5000	5/1	67	32.3	39.2	44.3	26.4*	15
Freezeout Sum.	15B10	7000	4/30	113	50.0	36.0	56.6	27.6*	14
Hoodoo Creek	15C1	6200	5/1	124	63.1	55.3	75.8	36.9*	13
**Lookout	15B2	5250	4/30	89	42.7	33.6	47.2	22.1	19
Lubrecht Forest #6	13C8	5400				0.0	0.0	--	5
North Fork Jocko	13B7	6330	4/30	92	48.3	45.6	50.3	35.6*	8
Pipestone Pass	12D1	7200	4/27	3	0.7	9.8	1.1	2.7*	16
Slide Rock Mt.	13C2	7100	5/4	48	18.9	--	18.7	10.7*	13
Smith Creek	16A1	4800	5/2	108	55.4	50.0	61.8	34.4	17
Stemple Pass	12C1	6900	4/30	30	9.4	11.4	13.4	6.6*	21
Storm Lake #2	13C7	7780	4/30	47	18.0	17.9	13.6	13.6*	14
Stuart Mt. #1	13C1	7400	5/1	78	34.7	--	38.3	27.0*	15
Tenmile, Lower	12C2	6250	4/27	10	2.7	8.4	3.5	2.0	20
Tenmile, Middle	12C3	6800	4/27	31	9.9	13.8	10.1	6.9	21
Tenmile Upper	12C4	8000	4/27	40	14.7	17.7	14.9	10.4	20
TV Mountain	14B1	6800	4/30	59	23.4	--	--	--	0
BITTERROOT									
Gibbons Pass	13D2	7100	4/30	60	27.2	24.2	23.8	20.0*	20
Lolo Pass	14C5	5300							0
**Moose Creek	13D16	6200	5/1	36	15.8			9.9*	12
Nezperce Camp	14D2	5580	5/1	40	15.5	17.3	3.6	4.7*	17
Nezperce Pass	14D1	6575	5/1	36	15.5	18.2	11.2	10.0*	18
**Packers Meadow	14C2	5700				28.5	32.3	12.9	18
**Powell Pasture	14C3	3700				3.5	--	5.2	17
**Powell R.S.	14C6	4230							
Stuart Mt. #1	13C1	7400	5/1	78	34.7	--	38.3	27.0	15

*Average is for less than 15 years of record in the 1938-52 period.
**Adjacent Basin

MONTANA SNOW SURVEYS - MAY 1, 1956

MISSOURI BASIN DRAINAGE BASIN AND SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS						Total Years of Record
				1956		Past Reocrd Water Content			
			Date of Survey	Snow Depth (In.)	Water Content (In.)	1955	1954	15-Year Average 1938-52	
LOWER YELLOWSTONE (Shoshone River)									
East Entrance	10E6	7000	4/29	9	2.2	2.9	8.3	9.9*	7
Sylvan Pass	10E5	7100	4/29	34	13.0	4.1	9.5	10.9*	12
LOWER YELLOWSTONE (Nowood Creek)									
Cold Springs Camp	7E25	8700	5/1	30	6.6	New	Course		
Medicine Lodge Lks	7E24	9500	5/1	46	10.8	New	Course		
Munkres Pass(Muddy)	7E8	9700	4/29	45	12.4	N.R.	N.R.	4.8*	1
North Powder #2	7E36	8300	4/28	32	9.1	New	Course		
Onion Gulch	7E27	8100	4/29	29	7.3	"	"		
Tensleep Lake	7E26	9075	4/30	43	11.3	"	"		
Tensleep R.S.	7E7	8300	4/30	13	3.2	--	--	--	--
Tyrell R.S.	7E35	8300				New	Course		
LOWER YELLOWSTONE (Shell Creek)									
Bald Mountain	7E21	9600	4/16	68	24.2	New	Course		
Beaver-Tongue Div.	7E20	9200	4/17	66	23.6	"	"		
Bone-Spring Div.	7E18	9200	4/19	59	20.8	"	"		
Granite Creek Camp	7E22	7800	5/2	0	0	"	"		
Granite Pass	7E17	8950	4/19	60	21.2	"	"		
Horse-Trail Div.	7E19	9200	4/17	60	19.6	"	"		
Ranger Creek	7E4	8800	5/2	26	8.2	--	--	--	--
Shell Creek	7E23	9600	5/2	61	17.9	New	Course		
LOWER YELLOWSTONE (Porcupine Cr.)									
Five Springs Falls	7E31	7500	5/3	13	4.6	New	Course		
Medicine Wheel	7E30	9000	4/17	49	15.5	"	"		
LOWER YELLOWSTONE (Tongue River)									
Beaver-Tongue Div.	7E20	9200	4/17	66	23.6	New	Course		
Big Goose #1	7E2	7700	4/22	17	4.4	1.6	1.9	2.6*	5
Big Goose #2	7E32	7700	4/22	34	9.9	New	Course		
Bone-Spring Div.	7E18	9200	4/19	59	20.0	"	"		

*Average is for less than 15 years of record in the 1938-52 period

MONTANA SNOW SURVEYS - MAY 1, 1956

			SNOW COVER MEASUREMENTS						
				1956		Past Record Water Content			Total Years of Record
MISSOURI BASIN DRAINAGE BASIN AND SNOW COURSE	No.	Elev.	Date of Survey	Snow Depth (In.)	Water Content (In.)	1955	1954	15-Year Average 1938-52	
LOWER YELLOWSTONE (TONGUE RIVER con't.)									
Burgess R.S. #1	7E1	7900	4/18	31	8.2	4.7	13.4	11.7*	5
Burgess R.S. #2	7E33	7900	4/18	31	8.7	New	Course		
Dome Lake #1	7E3	8800	4/21	32	9.6	3.1	6.4	4.7*	5
Dome Lake #2	7E34	8800	4/21	44	14.2	New	Course		
Gloom Creek	7E14	9300	4/20	54	17.5	"	"		
Granite Pass	7E17	8950	4/19	60	21.2	"	"		
Horse-Trail Div.	7E19	9200	4/17	60	19.6	"	"		
Lake Geneva	7E16	9000	4/23	38	10.0	"	"		
North Tongue	7E15	8800	4/18	46	13.9	"	"		
Sibley Lake	7E11	8000	4/16	40	10.4	"	"		
Sucker Creek	7E12	9000	4/20	44	13.8	"	"		
Steamboat Point	7E10	7500	4/20	32	9.8	"	"		
Wood Rock G.S.	7E13	8500	4/19	43	13.7	"	"		
LOWER YELLOWSTONE (Powder River)									
Muddy Creek G.S.	7E28	7800	4/28	15	5.1	"	"		
Munkres Pass(Muddy)	7E8	9700	4/29	45	12.4	9.6	7.8	8.0*	6
North Powder #2	7E36	8300	4/28	32	9.1	New	Course		
Onion Gulch	7E27	8100	4/29	29	7.3	"	"		
Soldier Park	7E5	8700	4/25	36	11.0	4.5	3.6	4.4*	6
Sour Dough	7E6	8500	4/26	38	10.8	4.2	5.5	4.8	19

*Average is for less than 15 years of record in the 1938-52 period

HUDSON BAY DRAINAGE

ST. MARY BASIN									
Iceburg Lake #3	13A3	5750	5/2	97	38.8	28.2	46.2	19.7	34
Josephine #4 Upper	13A14	5000	5/1	64	23.9	24.0	37.8	11.5	34
Josephine #9 Lower	13A15	4900	5/1	66	23.1	--	--	--	New
Mt. Allen #7	13A7	5700	5/1	128	49.4	46.3	72.1	39.9	34
Piegan Pass #6	13A6	6250	5/1	115	45.4	42.0	65.8	29.5	34
Ptarmigan #8	13A8	6000	5/2	118	48.4	34.3	51.7	29.7	19

MONTANA SNOW SURVEYS - MAY 1, 1956

MISSOURI BASIN DRAINAGE BASIN AND SNOW COURSE	No.	Elev.	Date of Survey	SNOW COVER MEASUREMENTS					Total Years of Record
				1956 Snow Depth (In.)	Water Content (In.)	Past Record Water Content			
						1955	1954	15-Year Average 1938-52	
LOWER YELLOWSTONE (Wind River)									
Big Warm	9F12	8800	4/25	43	13.3	1.7	--	--	1
Brooks Lake	10F8	9200	4/25	92	37.1	9.7	15.3	17.2*	15
Burroughs Creek	9F4	8800	4/27	64	23.5	4.4	11.0	13.2*	7
Dinwoodie	9F10	10000	4/28	64	21.8	2.9	6.5	11.2*	7
Dry Creek	9F9	9500	4/28	39	11.2	1.7	3.5	5.8*	7
DuNoir	9F6	8750	4/25	43	14.0	1.0	5.5	6.7*	14
East Fork	9F13	9200				New Course			
Geyser Creek	9F7	8500	4/26	34	11.4	1.5	5.5	6.8*	7
Little Warm	9F8	9500	4/26	83	28.7	5.0	11.1	16.9*	6
Sheridan R.S.#2	9F14	7500	4/25	31	9.7	2.3	--	--	1
T-Cross Ranch	9F3	8000	4/27	27	9.0	2.2	6.2	5.1*	15
Togwotee Pass	10F9	9600	4/30	107	47.4	11.6	21.1	19.2	20
LOWER YELLOWSTONE (Popo Agie River)									
Blue Ridge	8G2	9500	5/2	39	15.6	3.9	8.8	7.7*	14
Bruce's Camp	8G5	6500	5/2	0	0	New Course			
Hobb's Park	9G3	10000	4/30	69	27.3	4.5	12.3	15.0*	7
Mosquito Park R.S.	9G4	9500	4/30	29	9.7	2.0	5.3	5.9*	12
Sawmill Glade	8G1	8500	5/2	13	4.3	2.2	4.7	5.1*	14
South Pass	8G3	9000	5/2	44	19.9	5.5	10.6	9.6*	14
St. Lawrence R.S.	9F11	9000	4/29	33	9.4	1.3	3.7	5.0*	12
Trout Creek	9G2	8400	4/30	0	0	0.8	4.2	3.8*	7
LOWER YELLOWSTONE (Owl Creek)									
Beavers Mill	9F2	8900	--	--	--	3.8	6.4	5.4*	7
Owl Creek	8F1	8700	4/30	27	6.8	1.2	5.4	4.3*	7
LOWER YELLOWSTONE (Greybull River)									
Timber Creek #1	9E2	8800	5/1	23	6.5	0.9	N.R.	3.7*	4
Timber Creek #2	9E3	8800	5/1	11	3.0	New Course			
Wood River #1	9F1	8000	5/2	13	3.5	1.0	4.9	--	3
Wood River #2	9F15	8000				New Course			

*Average is for less than 15 years of record in the 1938-52 period

STATUS OF RESERVOIR STORAGE MAY 1, 1956

BASIN & STREAM	RESERVOIR	USABLE CAPACITY 1000's AF	THOUSAND ACRE FEET IN STORAGE 1956	ABOUT MAY FIRST 1955	1954	15-Yr.Avg. 1938-52
MISSOURI RIVER BASIN - MONTANA						
Beaverhead	Lima	84.00	41.55		32.38	75.1*
Ruby River	Ruby	38.85				
Madison River	Hebgen Lake	345.00	187.60	278.50	291.60	311.49
Madison River	Ennis Lake	41.00	27.93	35.88	31.80	33.45
Hyalite Creek	Middle Creek	8.03	4.47	5.94	6.44	--
Missouri River	Canyon Ferry	2,043.00	1,637.0	1,486.0	1,028.0	--
Missouri River	Hauser & Helena	62.50	55.64	59.60	53.46	50.1*
Missouri River	Lake Helena	10.45		9.42	7.37	10.1*
Missouri River	Holter Lake	81.92	73.05	81.68	79.55	67.6
N.Fk. Sun River	Gibson	105.00	77.05	95.28	92.70	97.1
N.Fk. Sun River	Willow Creek	32.30	28.18	26.82	29.13	17.4
N. Fk. Sun River	Pishkun	32.00	23.63	27.62	24.37	30.8
Teton River	Bynum	74.50				
Birch Creek	Swift	30.00	30.04	30.22	27.55	27.8
Dupuyer & Birch	Lake Francis	112.00	92.26	107.00	103.30	84.5
Marias River	Tiber Res.	1,316.00	130.6	--	--	New
Judith River	Ackley Lake	5.82		5.25	3.46	5.1*
Missouri River	Ft. Peck	18,800.00	5,164.0	9,716.0	12,860.	11,463.0*
Milk River	Fresno	127.20	108.6	135.20	128.70	75.4*
Milk River	Nelson	66.80	41.76	58.86	53.46	34.0
W. Rosebud Creek	Mystic Lake	20.80	1.99	2.55	7.27	6.3
Red Lodge Creek	Cooney	27.50			18.0	18.7*
Tongue River	Tongue River	73.90	18.86	35.97	26.01	39.1*
Swiftcurrent Crk	Sherburne Lake	66.10			20.34	40.6
MISSOURI RIVER BASIN - WYOMING						
Shoshone River	Buffalo Bill	440.00	130.4	133.8	147.8	252.8
Wind River	Boysen	408.60	0.0	268.7	382.0	152.4
Wind River	Pilot Butte	31.6	27.3	26.4	17.7	17.2
Bull Creek	Bull Lake	152.00	51.9	62.2	69.3	51.6
Belle Fourche	Key Hole	190.00	15.9	15.0	8.6	1.3
MISSOURI RIVER BASIN - NORTH DAKOTA						
Heart River	Heart Butte	54.80	67.1	60.3	63.7	--
Heart River	Dickerson	4.3	4.8	4.4	3.3	--
Missouri River	Garrison Lake		1,256.0			
MISSOURI RIVER BASIN - SOUTH DAKOTA						
Belle Fourche	Belle Fourche	185.00		68.0	120.4	117.2
Cheyenne River	Angostura	160.00	74.4	48.5	32.7	41.0
Cheyenne River	Deerfield	15.1	11.3	10.9	15.1	13.7
Grand River	Shadehill	84.00		77.8	82.7	--

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STATUS OF RESERVOIR STORAGE MAY 1, 1956

BASIN & STREAM	RESERVOIR	USABLE CAPACITY 1000's AF	THOUSAND ACRE FEET IN STORAGE			
				ABOUT MAY FIRST		15-Yr.Avg.
			1956	1955	1954	1938-52
COLUMBIA RIVER BASIN - MONTANA						
Flint Creek	Georgetown Lk	31.00	18.05	24.4	22.6	21.9*
S.Fk. Flathead 5/	Hungry Horse	3,428.00	1,942.0	2,631.0	2,526.0	-- *
Flathead River	Flathead Lake	1,791.00	1,079.0	1,145.0	1,563.0	1,862.0*
Flathead River 6/	Camas Res.	42.80	45.84	41.4	42.0	30.0*
Flathead River 7/	Mission Valley	98.60	47.28	69.1	33.9	68.0*
Jocko Creek	Lower Jocko Lk	7.6	--	5.2	4.9	4.6*

5/ 3-year average

6/ Camas Reservoirs are shown as a sum of (4) small reservoirs on the west side of Flathead Lake located on Dry Creek and Little Bitterroot River.

7/ Mission Valley Reservoirs are shown as a sum of (8) small reservoirs located south and east of Flathead Lake. Both Camas and Mission Valley reservoirs are operated by the Indian Irrigation Service.

* Average is for less than 15 years of record in the 1938-52 period.

MONTANA SNOW SURVEYS - APRIL 15, 1956

COLUMBIA BASIN DRAINAGE BASIN AND SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS						Total Years of Record
			Date of Survey	1956 Snow Depth (In.)	Water Content (In.)	Past Record Water Content As Noted			
FLATHEAD RIVER									
Desert Mountain	13A2	5600	4/18	42	17.0	(1949) 17.0	(1952) 16.8	--	2
Kishenehn #3	14A6	4000	4/13	22	7.6	--	--	--	0
Marias Pass	13A5	5250	4/16	56	21.6	(1949) 6.8	(1952) 17.6	(1954) 32.3	3
Trout Lake	13A12	3600	4/16	29	13.3	--	(1952) 13.2	--	1
Twin Creeks	13B11	3580	4/16	0	0	--	(1952) 5.0	--	1
UPPER CLARK FORK									
Coyote Hill	13B10	4200	4/16	21	8	--	(1952) 12.0	(1954) 10.7	2
Storm Lake #2	13C7	7780	4/16	49	18.5	(1949) 15.6	--	--	1
BITTERROOT									
Gibbons Pass	13D2	7100	4/17	74	31.6	--	(1952) 29.0	--	1
**Moose Creek	13D16	6200	4/16	51	20.8	--	--	--	0
**Packers Meadow	14C2	5700	4/16	57	28.3	(1949) 30.0	(1952) 25.2	--	2
Lolo Pass	14C5	5300	4/16	92	44.3	--	--	--	0

*Average is for less than 15 years of record in the 1938-52 period.
**Adjacent Basin.

Federal - State - Private

COOPERATIVE SNOW SURVEYS

Furnishes the basic data
necessary for forecasting
water supply for irrigation,
domestic and municipal water
supply, hydro-electric power
generation, navigation,
mining and industry

"WATER IS THE WEST'S GREATEST RESOURCE"